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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,440	03/26/2004	Gary J. Wendt	960296.00138	1479
27114	7590	02/23/2006	EXAMINER	
QUARLES & BRADY LLP 411 E. WISCONSIN AVENUE, SUITE 2040 MILWAUKEE, WI 53202-4497			KIKNADZE, IRAKLI	
			ART UNIT	PAPER NUMBER
			2882	

DATE MAILED: 02/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

H:A

Office Action Summary	Application No.	Applicant(s)	
	10/811,440	WENDT ET AL.	
	Examiner	Art Unit	
	Irakli Kiknadze	2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) ____ is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>3/21/05; 8/18/05</u> | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 9, 18, 22 and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 9, 12, 14, 15 and 16, recite the limitation "the electrical signal".

Claim 18 recites the limitation "the radiation exposure device" in lines 4 and 5.

Claim 22 recites the limitation "a radiation source" in lines 3 and 4.

Claim 28 recites the limitation "a radiation source" in line 3.

There are insufficient antecedent basis for this limitations in the claims.

Claim Rejections - 35 USC § 102

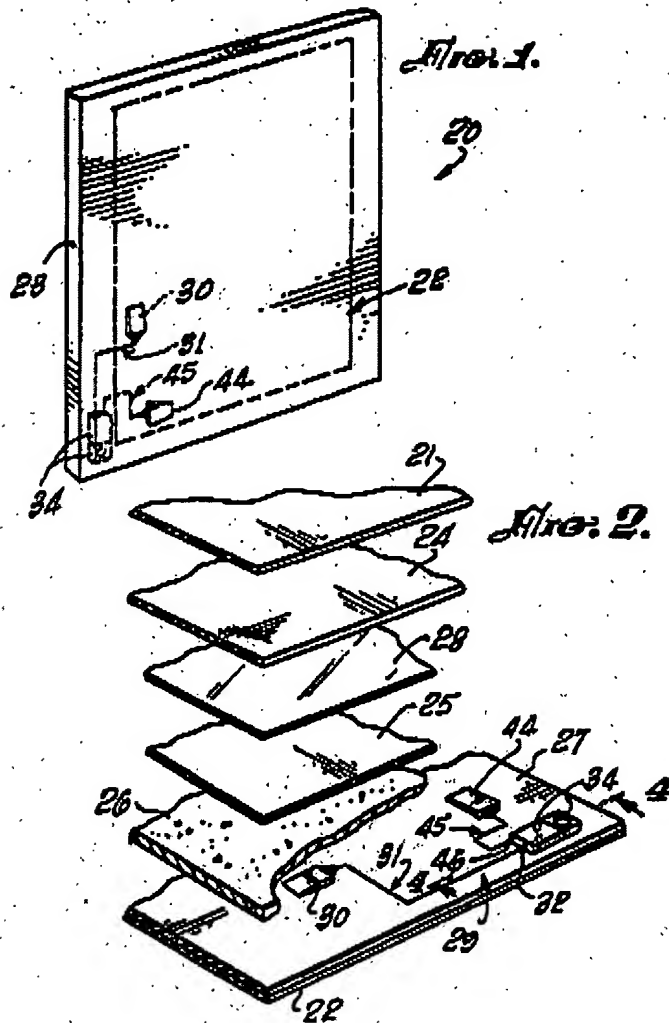
3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 4, 5, 7, 17-24, 29, 30, 34 and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Hayes et al. (US Patent 5,282,236).

With respect to claim 1, Hayes teaches a radiation exposure recording device (2) comprising (Figs. 1 and 2):



a radiation exposure recording medium (28) (column 4, lines 11-12); a housing (comprising a pair of metal covers (21) and (22) which are conventionally hinged along the side edge (23); column 3, lines 63-68) that at least partly surrounds the radiation exposure recording medium (28);

a first detector (a sensor (30) connected to a photodiode (47)) that detects a first radiation exposure and produces at least one signal in response to detecting the first radiation exposure (see abstract; column 2, lines 8-15; column 4, lines 14-21).

With respect to claims 4 and 5, the radiation exposure recording medium (28) is a radiation-sensitive film (column 4, lines 11-13) or like (see abstract, line 2), a medium well known in the art (column 9, lines 58-59) that inherently includes a photostimulable phosphor plate which has the same physical appearance as a standard x-ray film and provides same good spatial resolution, SNR and dynamic range.

With respect to claim 7, the radiation exposure recording medium (28) is at least partly contained within a cassette housing (Fig. 2; column 4, lines 11-13)

With respect to claim 17, the detector is implemented at least in part using at least one of a microprocessor and an application-specific integrated circuit (see abstract, lines 12-15).

With respect to claim 18, the radiation exposure recording device further comprising a second detector (a sensor (44) connected to a photodiode (47) column 4, lines 61-68), wherein the first detector (30) detects the first radiation exposure with respect to a first portion of the radiation exposure recording device, and the second detector (40) detects a second radiation exposure with respect to a second portion of the radiation exposure device (column 5, lines 8-14 and 58-61).

With respect to claim 19, the radiation exposure medium detects x-ray radiation (column 3, lines 51-61) and is capable of being utilized as a detector part of an x-ray radiography machine and a CT machine.

With respect to claim 20, detecting of the first radiation exposure includes determining that the first radiation exposure equaled a first threshold (column 7, lines 33-39 and column 6, lines 1-5 and 18-27).

With respect to claims 21 and 22, detecting the first radiation exposure includes determining an accumulating amount of the radiation exposure (column 6, lines 1-5).

With respect to claim 23, Hayes teaches a radiation exposure detection device (Figs. 1 and 2) for implementation on a radiography cassette (20), the detection device comprising:

a radiation-sensitive component (29) comprising a sensor (30) that provides a signal upon being exposed to radiation;

and a mechanism capable of attaching the radiation-sensitive component (30) to the radiography cassette (20) (column 4, lines 14-20).

With respect to claim 24, the radiation-sensitive component includes a photo-emitting device (47) (column 4, lines 66-68).

With respect to claim 28, the signal is indicative an accumulating amount of the radiation exposure (column 6, lines 1-5).

With respect to claim 29, Hayes teaches a radiography method comprising: providing a first radiation exposure recording medium (28) (column 4, lines 11-13); providing a first radiation exposure detector (a sensor (30) connected to a photodiode (47)); and sensing an exposure of radiation at the first radiation exposure detector (see abstract; column 2, lines 8-15; column 4, lines 14-21).

With respect to claim 34, Hayes teaches a second radiation exposure detector (44), and sensing an exposure of radiation at the second radiation exposure detector (column 4, lines 61-68 and column 5, lines 36-46).

5. Claims 1-3, 5-7, 17, 19, 21-26 and 28-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Kubota (JP 01309044 A2).

第 1 図

第 2 図

a radiation exposure

recording medium (1); a housing ((2A) and (2B)) that at least partly surrounds the radiation exposure recording medium (1), a first detector (10) that detects a first radiation exposure and produces at least one signal in response to detecting the first radiation exposure (see abstract and constitution).

With respect to claim 2, the first detector includes a clock circuit (12) and determines a time at which the radiation exposure has occurred (Figs. 1 and 2).

With respect to claim 3, the detector includes a liquid crystal display (13) that provides an indication of the time at which the radiation exposure has occurred (Fig.1).

With respect to claim 5, the radiation exposure recording medium (1) is a photostimulable phosphor plate (see Fig.2 and the title of the invention).

With respect to claim 6, the radiation exposure recording medium stores radiographic information in a digital manner that is readable by a reading mechanism (Fig.3).

With respect to claim 7, the radiation exposure recording medium (1) is at least partly contained within a cassette housing (Figs. 1-3).

With respect to claim 16, the radiation exposure recording medium is examined by a cassette reader sending an electrical signal to a controller (28) which is connected to a computer (50).

With respect to claim 17, the detector (10) is implemented at least in part using at least one of a microprocessor and an application-specific integrated circuit (11) (Fig.2).

With respect to claim 18, the radiation exposure recording device further comprising a second detector (10B) (Fig. 2).

With respect to claim 19, the radiation exposure medium detects x-ray radiation (4) (Fig. 2) and is capable of being utilized as a detector part of an x-ray radiography machine and a CT machine.

With respect to claims 21 and 22, the detecting of the first radiation exposure includes detecting an accumulated amount of radiation exposure (see abstract and constitution).

With respect to claim 23, Kubota teaches a radiation exposure detection device for implementation on a radiography cassette, the detection device comprising: a radiation-sensitive component (10) that provides a signal upon being exposed to radiation; and a mechanism capable of attaching the radiation-sensitive component to the radiography cassette (Fig. 2; see abstract and constitution).

With respect to claim 24, Kubota teaches that the radiation-sensitive component (10) includes a photo-emitting device (Fig. 2).

With respect to claim 25, Kubota teaches that the radiation-sensitive component includes a clock (12), and wherein the signal provided by the radiation-sensitive component includes time information that is indicative of when the radiation exposure occurred (Figs. 1 and 2; see abstract and constitution).

With respect to claim 26, Kubota teaches that the radiation-sensitive component includes a liquid crystal display (13) on which the time information is displayed (Fig. 1).

With respect to claim 28, the signal is indicative of an accumulated amount of radiation exposure (see abstract and constitution).

With respect to claim 29, Kubota teaches a radiography method comprising: providing a first radiation exposure recording medium (1); providing a first radiation exposure detector (10); and sensing an exposure of radiation at the first radiation exposure detector (Figs. 1 and 2; see abstract and constitution).

With respect to claim 30, Kubota teaches providing a first indication that the exposure of radiation has occurred when the exposure of radiation has been sensed (Figs. 1 and 2; see abstract and constitution).

With respect to claim 31, Kubota teaches recording a time at which the exposure of radiation has occurred (Figs. 1 and 2; see abstract and constitution).

With respect to claim 32, Kubota teaches providing of the indication includes displaying the time at which the exposure of radiation has occurred on a liquid crystal display (13) (Figs. 1 and 2; see abstract and constitution).

Claim Rejections - 35 USC § 103

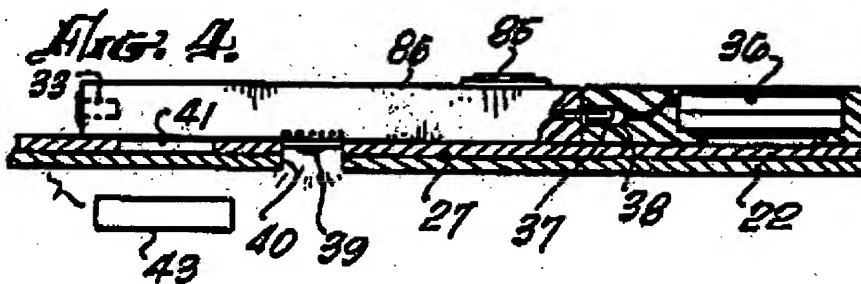
6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 8, 9, 12-15, 27 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayes et al. (US Patent 5,282,236) as applied to claims 1, 23 and 30 above, and further in view of Krause et al. (US Patent 4,082,953).

With respect to claims 8, Hayes teaches the claimed invention except that the detector is located on the radiation exposure recording medium. Krause teaches a radiation exposure device comprising a detector (4) located on radiation exposure recording medium, x-ray film (Fig. 1; column 1, lines 41-54; column 2, lines 26-30). It would have been obvious matter of design choice to one of ordinary skill in the art at the time the invention was made to provide the detector located on radiation exposure recording medium as suggested by Krause, since applicant has not disclosed that the detector located on radiation exposure recording medium solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the detector located on radiation exposure recording medium as suggested by Krause or with the detector located under radiation exposure recording medium as suggested by Hayes.

With respect to claim 9, Hayes teaches the arrangement wherein the cassette housing includes a window (40) and, when the detector provides the signal (LED (39) is



visible to its

observer as to its flashing or not), an indication of the radiation exposure is visible through the cassette housing (22) by way of the window (40) (Fig.4; column 4, lines 33-39).

With respect to claims 12-15, 27 and 33, Hayes teaches the claimed invention except for a wireless transmitter, wherein the signal is provided to the wireless transmitter, and wherein the wireless transmitter in turn communicates a wireless signal based upon the signal to a remote device. Krause teaches an automatic exposure arrangement measures the exposure time and has a radiation detector attached to the film holder, which is connected to a wireless transmitter. An antenna (5) connected to a receiver (12), receives the transmitted signals and controls the switching circuit for switching off the x-ray high voltage supply. An integrator for a signal corresponding to the detector signal precedes the transmitter. A threshold switching circuit has a threshold selected so that upon reaching the dosage corresponding to optimum film blackening, it switches and applies a control signal to the transmitter (see abstract; Figs.1-3; claim 1). A detector-transmitter circuit (4) (Figs. 1-3) is an integrated module. Such transmitter circuits for telemetry are well known in the Bio-Medical Telemetry art, wherein the wireless transmitter may be used to transmit the signals to a receiver, which, e.g., may be on a computer (column 2, lines 46-50). It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the x-ray film cassette comprising the wireless transmitter as suggested by Krause in the apparatus of Hayes, since such a modification would provide user with the mobile and ergonomically better designed radiation exposure recording system not connected to the associated circuits via cable.

8. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayes et al. (US Patent 5,282,236) as applied to claim 1 above, and further in view of Scaffer (US Patent 4,546, 256).

With respect to claims 10 and 11, Hayes teaches the claimed invention except that the detector is located on a surface of a cassette housing that substantially contains the radiation exposure recording medium. Scaffer teaches a device for monitoring x-ray radiation wherein rectangular shaped card or slide (26) comprising a radiation detector (28) located on a surface of a cassette housing (12) and affixed to the surface of the cassette (12) by a layer of pressure sensitive adhesive. This arrangement allows the slide (26) to be removable secured to any desirable location of the cassette housing (12) to detect x-ray radiation (column 4, lines 26-29 and 37-43). It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the card or slide comprising the radiation detector located on a surface of a cassette housing as suggested by Scaffer in the apparatus of Hayes, since such a modification would provide user with the capabilities to detect the x-ray radiation at any desirable location of the radiation exposure recording medium within the cassette housing.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irakli Kiknadze whose telephone number is 571-272-2493. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on 571-272-2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Irakli Kiknadze
February 16, 2006



EDWARD J. GLICK
SUPERVISORY PATENT EXAMINER